

# **PUBLIC WORKS OPERATIONS DEPARTMENT**

## **Department Purpose and Description**

The purpose of the Public Works Operations Department is to maintain the basic infrastructure needed for the City to exist and thrive. These basic facilities include streets, curbs, gutters, sidewalks, wastewater systems, storm water systems, street trees, parks and open space areas, and street signage & striping. The department also maintains the City's vehicle fleet and all City communication equipment, particularly used by Police and Fire. By maintaining facilities such as these, the Department contributes to the economic well-being, reputation and image of the City; and contributes to the quality of life for residents and businesses alike. We provide the means for residents to live in the City, and get safely to work, schools, shops, businesses, offices, and other communities.

## **Major Accomplishments – FY 2003**

The Street Maintenance Section was able to reduce the backlog of paving sewer lateral installations to the point that they now are able to place asphalt within 2 months of the lateral installation. In addition, the section was proactive in prolonging street pavement life by crack sealing streets and City parking lots. The crews were also proactive in reducing trip hazards as a result of lifted sidewalks by grinding areas that were lifted 1 inch or less. They started in high traffic areas frequented by the elderly such as around Fredericka Manor and Norman Park Senior Center. The crews also did grinding areas around all post offices and began doing schools and churches on the west side of the City.

The additional crew that was approved in fiscal year 2001 provided the section with the ability to respond to complaints in a more timely manner and freed the other two crews time and allowed them to repair larger areas of asphalt in a timely manner. The third crew handled most of the complaints, crack sealing, grinding of sidewalks, trash pickup, weed abatement and most of the pothole patching.

The Urban Forestry Section administered the tree-trimming contract, which trimmed 5,750 trees. City staff trimmed 804 trees at the Civic Center and other various locations. In addition, City staff was able to trim 1,285 young trees because of the increased staffing over the past few years. This is important because trimming the young trees eliminates structural defects early, which will save significant manpower in the future. This will also minimize hazards due to structural failure when the trees mature. Staff trimmed 980 trees that came in as complaints and planted 175 trees. Staff also removed fallen tree limbs at 260 locations that were called in by the public.

The Signing and Striping Section used their thermoplastic applicator to install striping at intersections. The use of this applicator has reduced the time to install crosswalks and turn pocket striping at an intersection from 8 hours to paint to 3 hours for thermoplastic installation. In addition to the time savings, the material will last approximately three to four times as long as paint. After the thermoplastic is placed on all intersections within the City, staff will then

need to replace the material at 1/4 of the intersections per year. This will result in a significant time and cost savings once the entire City is complete.

Installation of traffic signs for new development has increased significantly this year. The number of new signs estimated to be installed this fiscal year is 2,260, which is an increase of 1,335 from last fiscal year. Graffiti removal increased at transit stops and within the public right-of-way.

The Wastewater Collection Section has cleaned over 1,400,000 linear feet of sewer main this fiscal year. Staff also cleans, on a monthly basis, areas that are considered critical. These areas have the highest likelihood of generating a sewer spill due to alignment or grease buildup. Staff cleaned over 450,000 linear feet of sewer mains that are considered critical. In addition, they used their rodding machine to clear more than 255,000 linear feet of main of roots and other obstructions. In addition, staff has televised more than 103,000 linear feet of sewer mains and 3,500 linear feet of laterals. This allows staff to find problems before they create stoppages and allows staff to determine where problems are located resulting in less excavation and time to complete the job. The section also repaired 170 sewer laterals that had stoppages due to roots or other obstructions and 14 new laterals.

The Lift Station Section/Pool Maintenance Section maintains all pump stations. During the current fiscal year, the Olympic Parkway Pump Station had a problem with a leaking portion of its force main. This required a backup pump and highline to be installed. Staff worked with the developer and negotiated a deal whereby the City will receive the pump and highline after it is no longer needed to backup the system at that location. This will occur when the Salt Creek Interceptor goes on line and the pump station is decommissioned. Having this pump will provide a mobile backup to any pump station the City maintains which could prevent or reduce sewer spills and help the City to comply with the Clean Water Act.

The Storm Drain Section has cleaned over one million square feet of storm drain channel, 26,000 linear feet of storm drain pipe and televised 37,700 linear feet of storm drain. The majority of the storm drain televised was metal pipe that could fail which can result in major costs to the city if not caught before collapse. The storm drains and channels are being maintained at a higher level than previous years to try and comply with the NPDES regulations.

The Park Maintenance Section continued its efforts to meet City Council's maintenance standards for City parks and other property. Maintaining these standards would not be possible without the commensurate staffing formula recently adopted by Council for future park development and other City properties. During fiscal year 2003, park maintenance crews:

- Installed new playground equipment at Tiffany, Lancerlot, Valle Lindo, Los Ninos and Conneley Parks;
- Installed new comfort stations at Los Ninos, Greg Rogers and Otay Parks;
- Dethatched turf areas on all ball fields and soccer fields at all City parks;
- Installed four new monument signs at Tiffany, Valle Lindo, Otay and Conneley Parks;
- In accordance with new state law, installed approximately 70 no smoking signs within 25 feet of all City parks' tot lots;
- Installed two new footbridges and five new shelters at Hilltop Park; and
- Installed new ADA sidewalks at Hilltop Park.

The Operations Department is in the process of completing phase 2 of the Public Works Information Systems Modernization/Expansion Project. The WMS system has been expanded to add infrastructure module applications (IMA) to better manage the City's assets and to provide a link to the City's Geographic Information System (GIS) to visually show areas where work has been completed or has been planned. Once tied into the City's geographic information system (GIS) and the work management system (WMS), this data will be literally a click away. The following modules were added to the WMS during the current fiscal year:

- Storm Drain module to better manage the City's maintenance of pipes, manholes, inlets, outlets, channels, and detention/desiltation basins;
- Right-of-way module to better manage the City's infrastructure including traffic legends, pavement markings, street trees (any plant material), street lights, medians, sign supports, signs, traffic signals, and guard rails; and a
- Closed circuit television (CCTV) module which will confirm the substantive completion of construction, maintenance, or repair work and evaluate the present condition of the underground pipe network.

## **Major Goals and Challenges – FY 2004**

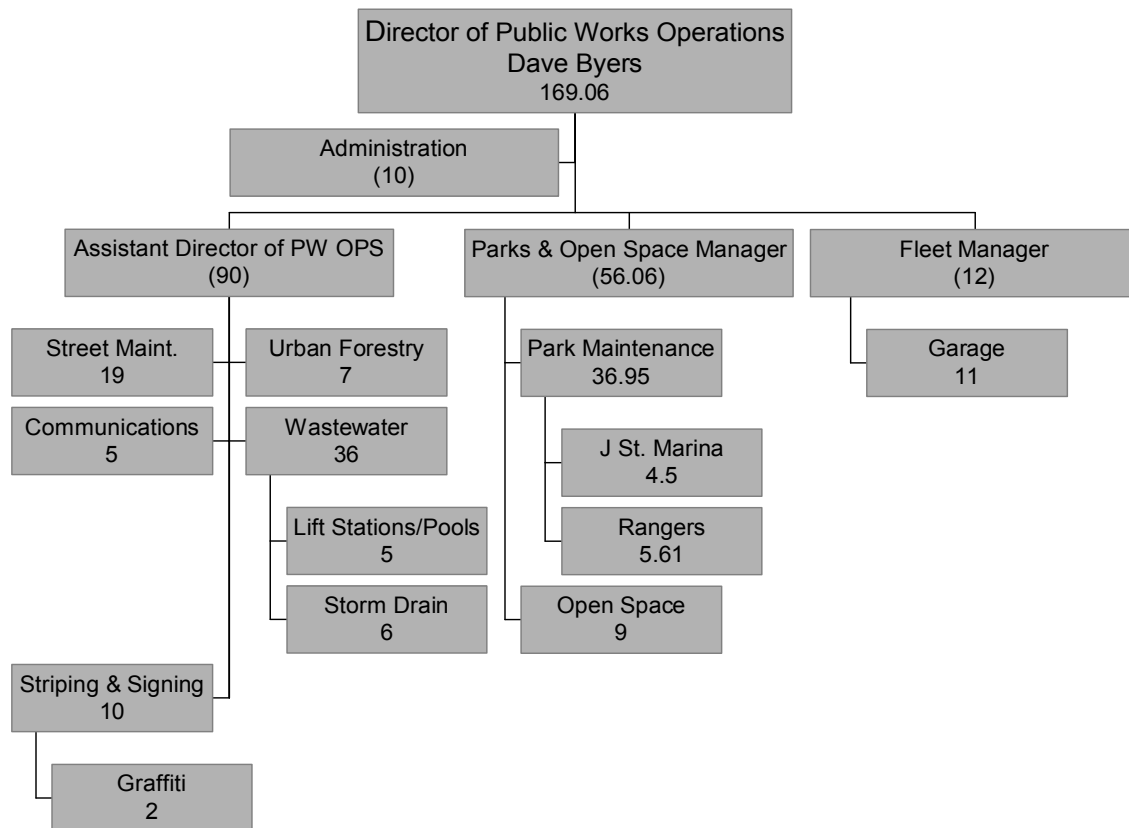
The next fiscal year will continue to focus on implementing phases 2 & 3 of the Public Works Information Systems Modernization/Expansion CIP Project. As additional streets, storm drains, sewers, etc. are being added to the city, various interfaces will be added to the WMS to update the IMA from the GIS. Interns have been hired to collect right-of-way data utilizing voice-to-data technology coupled with a global positioning system (GPS) technology. Sign supports & signs have been collected, as a first step. Interns are currently collecting traffic legends data and will also be collecting data such as pavement markings, street trees, street lights, medians, traffic signals, and guard rails. Both Operations and Engineering staff will utilize these modules and data.

Next fiscal year we will construct and implement the Supervisory Control and Data Acquisition (SCADA) system. SCADA will provide an alarm system for controlling and monitoring sewer lift stations, swimming pools, the Nature Center's water circulation equipment, and large (12") diameter sewer truck lines located in remote areas. This system will enable crews to put more of an emphasis on preventive maintenance by providing real-time monitoring, instantaneous alarm notification, and computerized control of equipment and critical systems. The Salt Creek Interceptor will also be monitored by the SCADA system.

The Operations Department is adding seven permanent positions in fiscal year 2004 to ensure the City's growing inventory of infrastructure, vehicles and equipment, and parks and open space are maintained up to City standards. A two-person crew with a combination storm flusher/Vactor truck are being added to routinely clean Continuous Defective Separation (CDS) units & storm drain filters/inlets for the new CFDs in Eastlake and Otay Ranch. Two Mechanic Assistants are being added to transport safety and general fleet vehicles needing repairs, and to perform lower level preventive maintenance inspections, tire replacements, and other simple quick-fix type vehicle repairs. Two Open Space Inspectors and a Fiscal Office Specialist are being added to assist with the administration of additional CFDs that will be turned over to the City. Finally, due to budget constraints, two Gardeners will not be added for the turnover of

22.50 acres of additional parklands for park maintenance. However, staff believes that absorbing the new parks without the addition of staff will have only a minor impact on the frequency of some maintenance tasks, such as edging, blowing, aerating, and fertilizing at some parks.

# PUBLIC WORKS OPERATIONS DEPARTMENT STAFFING 2003-04



# PUBLIC WORKS

## MISSION STATEMENT • GOALS • OBJECTIVES AND MEASURES

**MISSION STATEMENT:** Provide the City's basic infrastructure and public facilities through maintenance and maintain the City's vehicle fleet and communications system, so that the City can function and remain economically strong, and City residents can live and work in a safe and viable community.

**GOAL:** Maintain and repair City-owned infrastructure including streets and appurtenant facilities, sidewalks, curbs and gutters, and street trees.

**Objective:** *Enhance traffic safety by providing for safe movement of users of the circulation system by maintaining surface quality and visibility and the through the application of traffic signs, pavement markings, pavement repairs, and other means.*

1. Conduct a nighttime survey every six months to check illuminated street signs.
2. Trim trees interfering with the line of sight of motorists, obstructing traffic signals or causing hazards along sidewalks within 24 hours of notification.
3. Paint school crosswalks a minimum of once yearly and all other crosswalks once every three years.

**GOAL:** Manage and maintain the City's wastewater and storm drain systems and work closely with other sewer agencies regarding wastewater treatment and transportation.

**Objective:** *Provide an ongoing preventive maintenance program, via televising sewer main lines.*

Annual Measure	FY01 ACT.	FY02 ACT.	FY03 EST.	FY04 PROJ.	FY05 PROJ.
Linear ft of sewer line televised	150,258	165,699	103,000	170,000	170,000

**Objective:** *Provide an ongoing preventive maintenance program, via sewer main flushing.*

Annual Measure	FY01 ACT.	FY02 ACT.	FY03 EST.	FY04 PROJ.	FY05 PROJ.
Linear ft of sewer main flushing	1,196,278	1,678,962	1,400,000	1,700,000	1,700,000

**Objective:** *Participate in the establishment of a new National Pollutant Discharge Elimination System municipal discharge permit and fully comply with all aspects of the permit.*

**GOAL:** Properly maintain City vehicles and communications equipment to ensure that all City staff can perform their duties in the field, especially public safety personnel.

**Objective:** *Conduct preventive maintenance on automotive and heavy equipment and remove*

*equipment from service at the optimum time to minimize expenses and maximize revenue.*

Annual Measure	FY01 ACT.	FY02 ACT.	FY03 EST.	FY04 PROJ.	FY05 PROJ.
# of preventive maintenance inspections	1,050	1,120	1,230	1,400	1,400

**Objective:** *Provide immediate response for repairs to police and fire emergency communications equipment 24 hours per day.*

Annual Measure	FY01 ACT.	FY02 ACT.	FY03 EST.	FY04 PROJ.	FY05 PROJ.
Response rate to public safety communications requests for service	100%	100%	100%	100%	100%

**GOAL:** **Remove graffiti from City property within the public right-of-way to discourage further destruction of public and private properties and discourage additional crimes from occurring.**

**Objective:** *Provide a means of communication for the public and City staff to report locations of graffiti, and to remove it within 72 hours of receiving the information.*

Measure	FY01 ACT	FY02 ACT.	FY03 EST.	FY04 PROJ.	FY05 PROJ.
% graffiti removed within 72 hours	75%	75%	75%	75%	75%

**GOAL:** **Enhance the quality of life for all residents by providing a safe, attractive and well-maintained park and open space system that also preserves and protects the City's environmentally sensitive nature areas, and the parkways and medians of the City's major scenic corridors.**

**Objective:** *Maintain high visitation parks to a high standard.*

1. Manicure grounds weekly.
2. Clean restrooms twice daily.
3. Perform litter control weekly.
4. Maintain turf 3 times per year.

**Objective:** *Maintain athletic facilities and play lots in a safe and playable condition.*

1. Manicure turf weekly.
2. Replace infield soil as needed.

**Objective:** *Maintain the irrigation systems at all City parks, medians and open space areas to achieve an efficient and effective distribution of water.*

## **FLEET MANAGEMENT**

City vehicles and equipment are maintained by both City equipment mechanics and by contracts to local vendors for more specialized maintenance work, such as major transmission and air conditioning repairs. Funds are collected on an annual basis through each affected department's operating budget and deposited in a Fleet Management Fund. City vehicles and equipment are replaced according to a number of factors, such as the age of the vehicle, mileage, maintenance history, and major cost avoidance. Funds for replacement are also collected annually from each affected department; with dollar amounts determined by the vehicle's estimated "life" and estimated replacement cost.